UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2004/00165

April 30, 2004

Ms. Emily Rice
Field Manager, Upper Willamette Resource Area
Bureau of Land Management
P.O. Box 10226
2890 Chad Drive
Eugene, OR 97440-2226

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act Essential Fish Habitat Consultation on the Taylor Landing Recreation Site Improvement Project, River Mile 30, Lower McKenzie River (HUC 17090000401), Lane County, Oregon

Dear Ms. Rice:

Enclosed is a biological opinion prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) that addresses the proposed Taylor Landing Recreation Site Improvement Project. NOAA Fisheries concludes in this Opinion that the proposed action is not likely to jeopardize the continued existence of Upper Willamette River (UWR) chinook salmon (*Oncorhynchus tshawytscha*). As required by section 7 of the ESA, this Opinion includes reasonable and prudent measures with terms and conditions that are necessary to minimize the potential for incidental take associated with this action.

This document also contains a consultation on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and its implementing regulations (50 CFR Part 600). NOAA Fisheries concludes that the proposed action may adversely affect designated EFH for chinook salmon. As required by section 305(b)(4)(A) of the MSA, included are conservation recommendations that NOAA Fisheries believes will avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from the proposed action. As described in the enclosed consultation, 305(b)(4)(B) of the MSA requires that a Federal action agency must provide a detailed response in writing within 30 days of receiving an EFH conservation recommendation.

If you have any questions regarding this consultation, please contact Ron Lindland of my staff in the Oregon State Habitat Office at 503.231.2315.

Sincerely,

for Michael R Crouse

D. Robert Lohn
Regional Administrator

cc: Mark D'Aversa, BLM
Brad Goehring, USFWS

Endangered Species Act - Section 7 Consultation
Biological Opinion

&

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat Consultation

Taylor Landing Recreation Site Improvement Project,
River Mile 30, Lower McKenzie River, Lane County, Oregon

Action Agency:	Bureau of Land Management
Consultation Conducted By:	National Marine Fisheries Service, Northwest Region
Date Issued:	April 30, 2004
Issued by:	for Michael R Crouse _____ D. Robert Lohn Regional Administrator
Refer to:	**2004/00165**

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Consultation History

On February 19, 2004, NOAA's National Marine Fisheries Service (NOAA Fisheries) received a letter from the Eugene District of the Bureau of Land Management (BLM) requesting formal consultation pursuant to the Endangered Species Act (ESA) and consultation pursuant to section 305 (b) of the Magnuson-Stevens Fishery Management and Conservation Act (MSA) for the proposed Taylor Landing Recreation Site Improvement Project on the south bank of the McKenzie River near river mile (RM) 30 in Lane County, Oregon. The BLM determined that the proposed action was "likely to adversely affect" (LAA) Upper Willamette River (UWR) chinook salmon (*Oncorhynchus tshawytscha*). The Willamette Level I Team reviewed the biological assessment (BA) at its December 9, 2003 meeting. The Level I Team agreed with the LAA determination and provided editorial comments for inclusion in the final version of the BA.

NOAA Fisheries listed UWR chinook salmon as threatened under the ESA on March 24, 1999 (64 FR 14308). NOAA Fisheries issued protective regulations for UWR chinook salmon under section 4 (d) of the ESA on July 10, 2000 (65 FR 42422).

The objective of this biological opinion (Opinion) is to determine whether the proposed action is likely to jeopardize the continued existence of UWR chinook salmon. This consultation is conducted pursuant to section 7(a)(2) of the ESA and its implementing regulations, 50 CFR 402.

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed amended action will adversely affect designated EFH for chinook salmon, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

1.2 Proposed Action

The proposed action is the implementation by the BLM of the Taylor Landing Recreation Site Improvement Project on the south bank of the McKenzie River near RM 30 (T17S, R01E, Sec 19). The Taylor Landing Recreation Site, which is administered by the BLM, is on a secondary channel to the south of the main channel of the McKenzie River. The recreation site is approximately one acre.

The existing boat ramp area consists of gravel and sand with a steep drop-off into the river. The existing access road to the boat ramp is gravel-surfaced, and there is an existing native-surface (sand and silt) road where vehicles are parked. There are also several native-surface foot trails throughout the project site. Vegetation on the site consists of grass, shrubs, and approximately 75 maple, alder, and cottonwood trees ranging from 3 to 16 inches in trunk diameter.

To implement the proposed project, BLM will: (1) Install a prefabricated concrete panel boat ramp at the location of the existing boat ramp; (2) pave approximately 50 feet of the existing

gravel access road; (3) install a CXT-brand vault toilet beside the county road (Deer Horn Road) which accesses the site; (4) install an asphalt parking area for disabled people beside the toilet; (5) construct a wheelchair accessible, asphalt-surface fishing area beside the river; (6) construct wheelchair useable, asphalt-surface trails connecting the fishing area, toilet, and boat ramp areas; (7) install three picnic units, including grills and tables, and viewing benches at dispersed locations within the recreation area; (8) install gravel foot paths connecting the parking areas with the picnic units and the boat ramp; (9) install an informational sign near the boat ramp; and (10) close the existing native-surface road to vehicle traffic and plant the approximately 1,500 square foot area as well as other open spots throughout the recreation site with a mixture of Douglas-fir and cedar trees and native shrubs. One or two existing maple trees may need to be removed to accommodate site plans. All areas disturbed by construction activities will be returned to pre-construction contours, to the extent practicable. Silt fencing and other artifacts of construction will be removed from the site following the completion of construction activities.

Boat Ramp and Access Road

The proposed new boat ramp will be approximately 15 feet wide and 50 feet long and will be constructed of prefabricated concrete panels. To create a stable sub-grade for the new ramp, approximately 56 cubic yards of sand and silt may need to be removed. The excavated area will then be filled with a 6-inch thick layer of gravel and capped with 6-inch thick prefabricated concrete panels. All excavated material will be disposed of at an appropriate upland site.

The boat ramp will extend approximately 10 feet into the McKenzie River during average summer flows. Installation of the in-water portion of the ramp will require removal of approximately 5 to 10 cubic yards of sand/silt. Approximately 46 cubic yards of Class 3 riprap material will be placed around the edges of the ramp to protect it from under-cutting stream flows and to reduce the risk of sub-structural failure. It is expected that most of the in-water excavation, placement of concrete panels, and placement of riprap can be performed by an excavator operating from the streambank. However, it may be necessary for the excavator to occasionally enter the stream. Floating or standing silt curtains will be placed in the river channel surrounding the work site during any instream work and left in place until such time that it is determined that the risk of sedimentation to the stream from construction is eliminated. Equipment will be required to have spill containment kits and an absorbent boom will be deployed for all in-stream work. All in-water work will be completed during the preferred in-water work window for this reach of the McKenzie River between July 1 and August 31. In-water work is expected to be completed in one day, while other construction activities (out-of-water work) are expected to be completed in seven days.

The existing gravel access road from the county road to the boat ramp will be paved with asphalt. This access road to be paved is approximately 50 feet long. The paved portion of the access road will be at the upper end of the boat ramp and over 40 feet from the river. The entire area is on deep, sandy soil.

Vault Toilet

A CXT-brand vault toilet will be placed beside Deer Horn Road, which accesses the site. The toilet will be pumped and capped, and the facility will be closed during the winter and early spring months each year. A concrete retaining wall will be constructed between the toilet and shoulder of Deer Horn Road, and a concrete slab will be poured for the toilet to sit on. An asphalt-surfaced parking area for use by disabled persons will be constructed beside the toilet site. An asphalt-covered trail will connect the toilet/disabled parking area to the boat ramp area and wheelchair accessible fishing area. To attain acceptable grade of the trail for use by wheelchairs, approximately 10 cubic yards of material will need to be excavated. Approximately 11 cubic yards of material will be excavated during construction of the toilet and disabled parking area. As with the boat ramp, excavated material will be disposed of at an appropriate upland site. Excavated materials will be replaced with approximately equal volumes of gravel and/or asphalt.

Fishing Area

A wheelchair accessible fishing area will be constructed beside the McKenzie River. The fishing area will be approximately 15 feet by 15 feet (225 square feet), and will consist of a gravel base with either a concrete or asphalt surface. Approximately 10 cubic yards of sand/silt material will be removed and replaced with the same volume of gravel and asphalt or concrete. Class 3 riprap material will be placed to define and protect the fishing area. No in-water work will be necessary for construction of the fishing area.

Picnic/Viewing Areas and Signs

Picnic units (grills and tables) and viewing benches will be placed at three locations on the recreation site. Tables will be placed on and secured to concrete pads. Construction of each pad will require the removal of approximately 4.5 cubic yards of sand. Viewing benches and tables will be either wood or pre-cast concrete. Gravel-surfaced foot paths will connect the picnic units with the parking area and the boat ramp. An informational and interpretive sign structure will be installed near the boat ramp.

Recreation Site Rehabilitation

An existing, native-surface road at the site will be closed to vehicle traffic. Approximately 1,500 square feet along the old road and in open areas throughout the project site will be planted with a mixture of Douglas-fir and cedar trees and native shrubs. Existing noxious vegetation will be removed by hand pulling and replaced with appropriate shrub plantings.

2. ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Biological Information

The listing status and biological information for UWR chinook salmon is provided in Myers *et al.* (1998). An updated status review of each of these ESUs is provided in a draft document titled "Preliminary conclusions regarding the updated status of listed ESUs of West Coast salmon and steelhead,"drafted by the West Coast Salmon Biological Review Team (BRT) (NOAA Fisheries 2003).

The McKenzie River serves as a spawning, rearing, and migration area for UWR chinook salmon. However, because of substrate size and composition in the secondary channel where the proposed project will be, no suitable chinook spawning area exists within 200 yards of the proposed project site. The secondary channel may provided rearing and migratory habitat for UWR chinook salmon. Essential habitat features for salmonids are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food (juvenile only), riparian vegetation, space, and safe passage conditions. The proposed action may affect the essential habitat features of substrate, water quality, and cover/shelter.

According to Oregon Department of Fish and Wildlife (ODFW), the McKenzie River population of UWR spring chinook is the healthiest of the entire ESU:

> The McKenzie basin is the most important remaining area for natural production of spring chinook in the Willamette Basin. Although heavily influenced by hatchery fish, the wild population of spring chinook in the McKenzie River is the most productive in the Willamette gene conservation group. Although dams on tributaries (Blue River and South Fork) have eliminated some historic spawning areas, fish still have access to relatively undisturbed spawning and rearing habitat. The McKenzie River continues to be capable of producing at least several thousand wild adults, despite habitat alterations such as gravel operations and channelization in the lower McKenzie and Willamette rivers, an unscreened 2400 cfs hydroelectric diversion, and flood control reservoirs in the upper watershed. Current adult escapement is believed to be much less than the number required to fully seed the habitat. (From the ODFW stock status report at: http://www.dfw.state.or.us/springfield/McKChs.html.)

2.1.2 Evaluating the Proposed Action

The standards for determining jeopardy and destruction or adverse modification of critical habitat are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). In conducting analyses of habitat-altering actions under section 7 of the ESA, NOAA Fisheries uses the following steps of the consultation regulations combined with the Habitat Approach (NMFS 1999): (1) Consider the status and biological requirements of

the species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species and whether the action is consistent with the available recovery strategy; (4) consider cumulative effects; and (5) determine whether the proposed action, in light of the above factors is likely to appreciably reduce the likelihood of species survival in the wild or destroy or adversely modify critical habitat. In completing this step of the analysis, NOAA Fisheries determines whether the action under consultation, together with cumulative effects when added to the environmental baseline, is likely to jeopardize the ESA-listed species. If NOAA Fisheries finds that the action is likely to jeopardize the listed species, NOAA Fisheries must identify reasonable and prudent alternatives for the action.

2.1.3 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmonids is to define the species' biological requirements that are most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess to the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list the species for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for the listed species to survive and recover to a naturally-reproducing population level, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance its capacity to adapt to various environmental conditions, and allow it to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful rearing and migration. The current status of UWR chinook salmon, based on their risk of extinction, has not significantly improved since the species were listed.

2.1.4 Environmental Baseline

In step 2 of NOAA Fisheries' analysis, we evaluate the relevance of the environmental baseline in the action area to the species' current status. The environmental baseline is an analysis of the effects of past and ongoing human-caused and natural factors leading to the current status of the species or its habitat and ecosystem within the action area. The action area is defined by NOAA Fisheries regulations (50 CFR 402) as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area is the McKenzie River beside the work area and downstream to the limit of visible turbidity increases resulting from the boat ramp replacement and other construction activities associated with the proposed project.

The McKenzie River, a tributary of the Willamette River, drains an area of approximately 1,380 square miles, occupying 12% of the Willamette Basin (LCG 1996). Tracing the subbasin boundary in a clockwise direction, the watershed follows the Coburg Hills to the north and the crest of the Cascades to the east. The ridgeline separating the North Fork of the Middle Fork of the Willamette River Basin from the French Pete Basin and the South Fork McKenzie Basin forms the southern boundary. The confluence of the McKenzie River with the Willamette River shapes the western boundary, near the City of Coburg and just north of the City of Eugene (LCG 1996). Topography ranges from 10,355 feet at the summit of South Sister in the Cascade Mountains down to 374 feet near the mouth of the river (MRWC 2000).

The mainstem McKenzie River springs from the northeast portion of the watershed at Clear Lake (elevation 2,998 feet) and flows southward for 15 miles to Belknap Springs and then westward for 74 miles to the Willamette River. Lost Creek, Horse Creek, South Fork McKenzie River, and Quartz Creek comprise the principal tributaries draining to the mainstem from the south (MRWC 2000). Smith River, Blue River, Gate Creek, Camp Creek, and the Mohawk River are the principal tributaries joining from the north. In total, about 1,776 stream miles comprise the McKenzie River subbasin hydrography (MRWC 2000).

Diversions, water withdrawals, roads, changes in landscape vegetation, and the construction of eight dams (MRWC 2000) have altered the natural flow patterns of the McKenzie River. These dams are operated by either the Eugene Water and Electric Board (EWEB) or the Corps of Engineers and provide flood control, flow augmentation, navigation, and hydroelectric power. The mean annual flow of the McKenzie River is approximately 460 cubic feet per second (cfs) at the outlet of Clear Lake and 5,800 cfs near the confluence with the Willamette River at Armitage State Park. River discharges peak in February with approximately 10,200 cfs to 2,000 cfs in September on the lower mainstem (LCG 1996). Summer discharges are roughly one-third higher than during pre-dam periods due to the releases of water from the Cougar and Blue River Reservoirs (LCG 1996).

Salmonid habitat quality in the McKenzie River subbasin has been reduced during the last century due to disturbances caused by urban development, logging practices, and the construction of dams and roads. These disturbances have fragmented habitat and simplified channel complexity thus reducing native fish populations and allowing non-native species to successfully compete (MRWC 2000). Water quality has also suffered. The section of the mainstem McKenzie River including the project action area is listed on the ODEQ List of Water Quality Limited Waterbodies for temperature during the summer months (ODEQ 2002).

The project action area is within the Lower McKenzie River 5th field watershed (HUC 17090000401), which is the western most area in the subbasin and drains approximately 104,000 acres or 14% of the total subbasin area.

Environmental baseline conditions within the action area were evaluated for the subject action at the project level and watershed scales. This evaluation was based on the "matrix of pathways and indicators (MPI) described in "Making Endangered Species Act Determinations of Effect for

Individual or Grouped Actions at the Watershed Scale" (NMFS 1996). This method assesses the current condition of instream, riparian, and watershed factors that collectively provide properly functioning aquatic habitat essential for the survival and recovery of the species.

In the Lower McKenzie River 5th Field Watershed, none of the 16 habitat indicators for which data were available in the MPI were rated as properly functioning. Nine of the 16 indicators were rated as functioning "at risk." These were sediment/turbidity, chemical contamination/nutrients, substrate, pool frequency/quality, off-channel habitat, refugia, streambank stability, floodplain connectivity, and peak/base flows. The temperature, physical barriers, large woody debris, width/depth ratio, road density, disturbance history, and riparian reserve indicators were rated as not properly functioning. The environmental baseline conditions for each habitat indicator in the MPI are described in the BA and incorporated herein by reference.

Within the Lower McKenzie Watershed and the project action area, a higher percentage of development than upriver has altered fish and wildlife habitat features. Development has caused the removal of riparian vegetation and riprapping of riverbanks. The mainstem and tributaries have been channelized, resulting in the loss of backwater and off channel rearing habitat. Industrial, agricultural, and urban stormwater runoff likely influences both the quantity and quality of water entering the McKenzie River (LCG 1996).

The McKenzie River, inclusive of the project site, is listed on the Oregon Department of Environmental Quality (DEQ) 303(d) List of Water Quality Limited Waterbodies (DEQ 2002). The McKenzie River is listed for temperature up to river mile 83.0.

The new boat ramp will be constructed mostly within the footprint of the existing ramp. The project site is on a secondary channel of the McKenzie River to the south of the main channel. Vegetation on the site consists of grass, shrubs and approximately 75 maple, alder, and cottonwood trees ranging from 3 to 16 inches in trunk diameter.

2.1.5 Effects of Proposed Action

In step 3 of the jeopardy analysis, NOAA Fisheries evaluates the effects of the proposed action on ESA-listed salmonids and their habitat.

Installation of Replacement Boat Ramp

Removal of bottom substrate at the existing boat ramp site to establish proper elevation and grade for installation of the replacement ramp, placement of aggregate fill material as a base for the new ramp, placement of the pre-cast concrete planks at the lower end of the new boat ramp, and placement of riprap material along the edges of the new ramp will disturb stream sediment and result in an increase in stream turbidity in the McKenzie River at the project site and possibly for a short distance downstream. In-water work will be completed during the preferred period between July 1 and August 31. However, juvenile UWR chinook salmon may occur year-round in the reach of the McKenzie River addressed in this Opinion, and therefore, may be

present in the secondary river channel where the proposed project will be located. Few, if any, juveniles are expected to be present in the McKenzie River at the project site because: (1) The out-migration of smolts will have already occurred; (2) warm water temperatures occurring during the time of project construction; and (3) lack of other suitable habitat conditions for juvenile salmonid rearing in the project area.

Behavioral avoidance of turbid waters by juvenile salmonids may be one of the most important effects of suspended sediments (DeVore *et al.* 1980, Birtwell *et al.* 1984, Scannell 1988). Salmonids have been observed to move laterally and downstream to avoid turbid plumes (McLeay *et al.* 1984, 1987, Sigler *et al.* 1984, Lloyd 1987, Scannell 1988, Servizi and Martens 1991). Juvenile salmonids tend to avoid streams that are chronically turbid, such as glacial streams or those disturbed by human activities, except when the fish need to traverse these streams along migration routes (Lloyd *et al.* 1987).

Fish that remain in turbid, or elevated total suspended solids, waters may have reduced predation from piscivorus fish and birds (Gregory and Levings 1998). In systems with intense predation pressure, this may provide a beneficial trade-off (*e.g.*, enhanced survival) to the cost of potential physical effects (*e.g.*, reduced growth). Turbidity levels of about 23 Nephalometric Turbidity Units (NTU) have been found to minimize bird and fish predation risks (Gregory 1993). Exposure duration is a critical determinant of the occurrence and magnitude of physical or behavioral effects (Newcombe and MacDonald 1991). Salmonids have evolved in systems that periodically experience short-term pulses (days to weeks) of high suspended sediment loads, often associated with flood events, and are adapted to such high pulse exposures. Adult and larger juvenile salmonids appear to be little affected by the high concentrations of suspended sediments that occur during storm and snowmelt runoff episodes (Bjornn and Reiser 1991). However, research indicates that chronic exposure can cause physiological stress responses that can increase maintenance energy and reduce feeding and growth (Redding *et al.* 1987, Lloyd 1987, Servizi and Martens 1991).

Before beginning soil-disturbing activities at the project site, silt fencing and floating silt curtains will be installed around the perimeter of the project area and at other places as appropriate. Use of these sediment control measures are expected to minimize transport of sediment and resultant turbidity increases in the McKenzie River at the project site and downstream, and to minimize the area of potential increased turbidity.

As with all construction activities, accidental release of fuel, oil, and other contaminants may occur. Operation of heavy equipment requires the use of fuels and lubricants which, if spilled in the stream channel or riparian area can injure or kill aquatic organisms. Petroleum-based contaminants, such as fuel, oil, and some hydraulic fluids, contain poly-cyclic aromatic hydrocarbons (PAHs) which can be acutely toxic to salmonids at high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms (Neff 1985). The potential for pollutants to enter the stream will be minimized by staging fuels and equipment in approved areas, by having a spill-control plan, and by having spill-control materials on site.

All areas that are disturbed by construction activities associated with the proposed project will be planted with native varieties of vegetation. As the vegetation matures over time, it will contribute to the improvement of habitat functions. No existing large trees will be removed in the action area.

Installation of Vault Toilet, Parking Area, Trails, Fishing Area, and Picnic Units

The ground-disturbing activities associated with the proposed improvements to the Taylor Landing Recreation Site have the potential to cause sediment transport to and increase turbidity in the McKenzie River. These ground-disturbing activities include: (1) Installation of the vault toilet; (2) construction of the parking area for use by disabled persons; (3) construction of trails between the parking area, toilet, fishing area, and boat ramp; (4) construction of the wheelchair accessible fishing area; (5) construction of the picnic units; and (6) installation of the informational and interpretive sign. As mentioned above, silt fencing will be placed at appropriate locations before beginning soil disturbing activities. Sediment control measures are expected to minimize the transport of sediment and resultant turbidity increases in the McKenzie River at the project site and downstream. Therefore, NOAA Fisheries believes that the proposed actions will cause only a minor, short-term increase in stream turbidity in the McKenzie River at the site and for a short distance downstream.

Paving the access road, boat ramp, trails, parking area, and fishing area with asphalt and construction of concrete pads for the toilet and picnic units will create a total of approximately 2,600 square feet of new impervious surface. The only new impervious surface which is immediately beside the river is the fishing area, which is approximately 225 square feet. The fishing area pad will be only 15 feet in length, so any direct run-off into the river from the pad is expected to be minimal. The boat ramp itself is not totally impervious, since it consists of spaced, pre-cast concrete panels. All other new impervious surfaces are 40 feet or more from the river. The entire project site is on deep, sandy soil which is expected to absorb any run-off from newly-created impervious surfaces before the run-off reaches the river. In addition, over 1,500 square feet of existing roads and trails will be re-vegetated with trees (Douglas-fir and cedar) and native shrubs. Because of the soil type, the distance from the river of most new-hardened areas, and re-vegetation of currently unvegetated sites, run-off to the McKenzie River is not expected to increase as a result of the new impervious surfaces.

According to the BA, one or two maple trees may need to be removed to accommodate site. plans. However, because of the presence of numerous (approximately 75) other maple, alder, and cottonwood trees at the site, no change in canopy cover or shade will result from the removal of two trees.

Potential Increased Use at the Site

Proposed improvements to the boat ramp, vault toilet, fishing area, and picnic units at the Taylor Landing Recreation Site could result in increased use by recreationists at the site. Increased motorized boating could increase the potential for introduction of chemical contaminants (petroleum products) to the river. As mentioned above, petroleum-based contaminants, such as fuel, oil, and some hydraulic fluids, contain PAHs which can be acutely toxic to salmonids at

high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms. Because of the flow of the McKenzie River, any increase in contaminants resulting from increased recreational use at the site is not expected to result in detectable levels. Closing and revegetating approximately 1,500 square feet of the existing natural-surface road and other open spaces at the site to prevent vehicle access is expected to reduce the potential for chemical contamination from automobiles from that area. Installation of the vault toilet at the site should reduce the potential for introduction of human waste to the river.

Recreation Site Rehabilitation

Potential beneficial effects resulting from the proposed Taylor Landing Recreation Site Improvement Project include: (1) Decreased potential for sediment transport to the McKenzie River as a result of closure of the existing natural-surface road and planting over 1,500 square feet of currently unvegetated areas with native trees and shrubs; and (2) potential long-term increase in stream shade and available large woody debris as the newly-planted Douglas-fir and cedar trees mature.

2.1.6 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as those effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation". This is step 4 in NOAA Fisheries' analysis process. Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities are being (or have been) reviewed through separate section 7 consultation processes. Therefore, these actions are not considered cumulative to the proposed action.

NOAA Fisheries is not aware of any specific future non-federal activities within the action area that would cause greater impacts to listed species than presently occurs. NOAA Fisheries assumes that future private and state actions will continue at similar intensities as in recent years**.**

2.1.7 Conclusion

The final step in NOAA Fisheries' approach to determine jeopardy is to determine whether the proposed action is likely to appreciably reduce the likelihood of species survival or recovery in the wild. NOAA Fisheries has determined that when the effects of the proposed action addressed in this Opinion are added to the environmental baseline and cumulative effects occurring the action area, it is not likely to jeopardize the continued existence of UWR chinook salmon. NOAA Fisheries used the best available scientific and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects.

These conclusions are based on the following considerations: (1) All in-water work will take place during the preferred in-water work window for this reach of the McKenzie River between

July 1 and August 31 when UWR chinook salmon are least likely to be present; (2) any increases in sedimentation and turbidity in the project area will be short-term and minor in scale, and will not worsen existing conditions of stream substrate in the action area; (3) planting of Douglas-fir and cedar trees and native shrubs in the riparian zone will offset the slight loss of benthic and riparian habitat associated with the proposed project; (4) the project site is on a secondary channel of the McKenzie River with no suitable chinook salmon spawning habitat within 200 yards of the site; and, (5) the proposed action is not likely to impair properly functioning habitat, or retard the long-term progress of impaired habitat toward proper functioning condition essential to long-term survival and recovery at the population or ESU scale.

2.1.8 Reinitiation of Consultation

This concludes formal consultation on these actions in accordance with 50 CFR 402.14(b)(1). Reinitiation of consultation is required: (1) If the amount or extent of incidental take is exceeded; (2) if the action is modified in a way that causes an effect on the listed species that was not previously considered; (3) new information reveals effects of the action that may affect the listed species in a way not previously considered; (4) a new species is listed that may be affected by the action; or (5) new critical habitat rulemaking results in the designation of critical habitat that may be affected by the action (50 CFR 402.16).

2.2 Incidental Take Statement

The ESA at section 9 [16 USC 1538] prohibits take of endangered species. The prohibition of take is extended to threatened anadromous salmonids by section 4(d) rule [50 CFR 223.203]. Take is defined by the statute as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." [16 USC 1532(19)] Harm is defined by regulation as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavior patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering." [50 CFR 222.102] Harass is defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering." [50 CFR 17.3] Incidental take is defined as "takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant." [50 CFR 402.02] The ESA at section 7(o)(2) removes the prohibition from any incidental taking that is in compliance with the terms and conditions specified in a section 7(b)(4) incidental take statement [16 USC 1536].

2.2.1 Amount or Extent of the Take

NOAA Fisheries anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of ESA-listed UWR chinook salmon. Harm or harassment (non-lethal take) of juvenile UWR chinook salmon may result from increased turbidity in the McKenzie River from construction activities at the project site and from in-water work. In-water work

associated with boat ramp installation could also result in minor lethal take of juvenile UWR chinook salmon. However, lethal take is not expected, because the fish would avoid the area when in-water work is in progress (approximately one day). Even though NOAA Fisheries expects some low level of incidental take from turbidity, the best scientific and commercial data available are not sufficient to enable NOAA Fisheries to estimate a specific amount of incidental take to the species itself. In instances such as these, NOAA Fisheries designates the expected amount of take as "unquantifiable." Based on the information provided by the BLM and other available information, NOAA Fisheries anticipates that an unquantifiable amount of incidental take, predominantly in non-lethal form, could occur as a result of the action covered by this Opinion. The extent of the incidental take is limited to the action area.

2.2.2 Reasonable and Prudent Measures

NOAA Fisheries believes that the following reasonable and prudent measures are necessary and appropriate to avoid or minimize take of listed salmonid species resulting from the action covered by this Opinion. The BLM shall:

1. Minimize the likelihood of incidental take of UWR chinook salmon from general construction activities by directing the contractor to avoid or minimize adverse effects to riparian and aquatic systems.

2. Minimize incidental take from use of in-water structures (boat ramp) by applying conditions that avoid or minimize adverse effects to riparian and aquatic systems.

3. Monitor the effectiveness of the conservation measures (*e.g.* riparian plantings, erosion control measures) in minimizing take of UWR chinook salmon.

2.2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the BLM must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary and, in relevant part, apply equally to proposed actions in all categories of activity.

1. To implement reasonable and prudent measure #1 (general conditions for construction, operation and maintenance), the BLM shall ensure that:

    a. Minimum area. Confine construction impacts to the minimum area necessary to complete the project.

b. Timing of in-water work. Work below the bankfull elevation[1] will be completed during the preferred in-water work period of July 1 - August 31, unless otherwise approved in writing by NOAA Fisheries.

c. Pollution and Erosion Control Plan. Prepare and carry out a pollution and erosion control plan to prevent pollution caused by surveying or construction operations. The plan must be available for inspection on request by BLM or NOAA Fisheries.

i. Plan Contents. The pollution and erosion control plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.

(1) The name and address of the party(s) responsible for accomplishment of the pollution and erosion control plan.

(2) Practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.

(3) Practices to confine, remove and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.

(4) A description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.

(5) A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

(6) Practices to prevent construction debris from dropping into any stream or waterbody, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.

ii. Inspection of erosion controls. During construction, monitor instream turbidity and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often as necessary, to ensure the erosion controls are working adequately.[2]

(1) If monitoring or inspection shows that the erosion controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.

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[1] 'Bankfull elevation' means the bank height inundated by a 1.5 to 2-year average recurrence interval and may be estimated by morphological features such average bank height, scour lines and vegetation limits.

[2] 'Working adequately' means that project activities do not increase ambient stream turbidity by more than 10% above background 100 feet below the discharge, when measured relative to a control point immediately upstream of the turbidity causing activity.

(2) Remove sediment from erosion controls once it has reached 1/3 of the exposed height of the control.

d. Construction discharge water. Treat all discharge water created by construction (*e.g,* concrete washout) as follows.

I. Water quality. Design, build and maintain facilities to collect and treat all construction discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals and other pollutants likely to be present.

ii. Discharge velocity. If construction discharge water is released using an outfall or diffuser port, velocities may not exceed 4 feet per second, and the maximum size of any aperture may not exceed one inch.

iii. Pollutants. Do not allow pollutants including green concrete, contaminated water, silt, welding slag, sandblasting abrasive, or grout cured less than 24 hours to contact any wetland or the 2-year floodplain.

e. Preconstruction activity. Complete the following actions before significant[3] alteration of the project area.

I. Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.

ii. Emergency erosion controls. Ensure that the following materials for emergency erosion control are onsite.

(1) A supply of sediment control materials (*e.g.,* silt fence, straw bales).

(2) An oil-absorbing, floating boom whenever surface water is present.

iii. Temporary erosion controls. All temporary erosion controls will be in place and appropriately installed downslope of the project activity within the riparian area until site restoration is complete.

f. Heavy Equipment. Restrict use of heavy equipment as follows:

I. Choice of equipment. When heavy equipment will be used, the equipment selected will have the least adverse effects on the environment (*e.g.*, minimally-sized, low ground pressure equipment).

ii. Vehicle and material staging. Store construction materials, and fuel, operate, maintain and store vehicles as follows.

(1) To reduce the staging area and potential for contamination, ensure that only enough supplies and equipment to complete a specific job will be stored on site.

(2) Complete vehicle staging, cleaning, maintenance, refueling, and fuel storage in a vehicle staging area placed 150 feet or more from

[3] 'Significant' means an effect can be meaningfully measured, detected or evaluated.

any stream, waterbody or wetland, unless otherwise approved in writing by NOAA Fisheries.

(3) Inspect all vehicles operated within 150 feet of any stream, waterbody or wetland daily for fluid leaks before leaving the vehicle staging area. Repair any leaks detected in the vehicle staging area before the vehicle resumes operation. Document inspections in a record that is available for review on request by BLM or NOAA Fisheries.

(4) Before operations begin and as often as necessary during operation, steam clean all equipment that will be used below bankfull elevation until all visible external oil, grease, mud, and other visible contaminates are removed.

g. Site preparation. Conserve native materials for site restoration.

i. If possible, leave native materials where they are found.

ii. If materials are moved, damaged or destroyed, replace them with a functional equivalent during site restoration.

h. Compensatory mitigation. Plant a mixture of Douglas-fir, cedar, and shrubs, as described in the Proposed Action (section 1.2 above), to compensate for the potential loss of in-stream and near-stream habitat associated with the installation of the replacement boat ramp and the fishing area pad.

i. No herbicide application will occur within 300 feet of any stream channel as part of this action, unless approved in writing in advance by a NOAA Fisheries Biologist. Mechanical removal of undesired vegetation and root nodes is permitted.

j. No surface application of fertilizer will be used within 50 feet of any stream channel as part of this action.

2. To implement reasonable and prudent measure #2 (boat ramp), the BLM shall ensure that:

a. Educational Signs Posted. Because the best way to minimize adverse effects caused by boating is to educate the public about pollution and its prevention, post the following information on a permanent sign that will be maintained at each permitted facility used by the public (such as marinas, public boat ramps, *etc.*).

(1) A description of the ESA-listed salmonids which are or may be present in the project area.

(2) Notice that the adults and juveniles of these species, and their habitats, are be protected so that they can successfully migrate, spawn, rear, and complete other behaviors necessary for their recovery.

(3) Lack of necessary habitat conditions may result in a variety of adverse effects including direct mortality, migration delay, reduced spawning, loss of food sources, reduced growth, reduced populations and decreased productivity.

(4) Therefore, all users of the facility are encouraged or required to:
(a) Follow procedures and rules governing use of sewage pump-out facilities.
(b) Minimize the fuel and oil released into surface waters during fueling, and from bilges and gas tanks.
(c) Avoid cleaning boat hulls in the water to prevent the release of cleaner, paint and solvent.
(d) Practice sound fish cleaning and waste management, including proper disposal of fish waste.
(e) Dispose of all solid and liquid waste produced while boating in a proper facility away from surface waters.

3. To implement reasonable and prudent measure #3 (monitoring), the BLM shall:

a. Within 30 days of completing the project, submit a monitoring report to NOAA Fisheries describing the BLM's success meeting these terms and conditions. This report will consist of the following information:
i. Project identification:
(1) Project name.
(2) Starting and ending dates of work completed for each phase of the project.
(3) Name and address of the construction supervisor.
ii. A narrative assessment of the project's effects on natural stream function.
iii. Photographic documentation of environmental conditions at the project site before, during and after project completion.

b. Additional project-specific data, as appropriate for each phase of the project.
i. Site restoration:
(1) Planting composition and density.
(2) Control of invasive non-native vegetation.
(3) Success of riparian plantings.
(4) Effectiveness of trail decommissioning in reducing sediment transport to streams.
ii. Streambank protection: (if applicable)
(1) Type and amount of material used.
(2) Linear feet of streambank protected.

c. Salvage notice. Include the following notice with each permit issued, or in writing to each party that will supervise completion of the action.

> NOTICE. If a sick, injured or dead specimen of a threatened or endangered species is found, the finder must notify the Vancouver Field Office of NOAA Fisheries Law Enforcement at 360.418.4246. The finder must take care in handling of sick or injured specimens to ensure effective treatment, and in handling dead specimens to preserve

biological material in the best possible condition for later analysis of cause of death. The finder also has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed unnecessarily.

d. Monitoring reports will be submitted to:

NOAA Fisheries
Oregon Habitat Branch
Attn: 2004/00165
525 NE Oregon Street, Suite 500
Portland, OR 97232-2778

3. MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

3.1 Background

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;

- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;

- Federal agencies shall within 30 days after receiving conservation recommendations from NOAA Fisheries provide a detailed response in writing to NOAA Fisheries regarding the

> conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the Federal agency shall explain its reason for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.2 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: Chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other waterbodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the *Pacific Coast Salmon Plan* (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.3 Proposed Action

The proposed action is detailed above in section 1.2 of this document. The action area includes a secondary channel of the McKenzie River at RM 30. This area has been designated as EFH for various life stages of chinook salmon.

3.4 Effects of Proposed Action

As described in detail in the ESA portion of this consultation, the proposed activities would result in detrimental, short-term, adverse effects to a variety of habitat parameters.

3.5 Conclusion

NOAA Fisheries believes that the proposed action will temporarily adversely affect the EFH for chinook salmon.

3.6 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. In addition to conservation measures proposed for the project by the BLM, all of the reasonable and prudent measures and the terms and conditions contained in sections 2.2.2 and 2.2.3, respectively, of the ESA portion of this Opinion are applicable to salmon EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH conservation recommendations.

3.7 Statutory Response Requirement

The MSA (section 305(b)) and 50 CFR 600.920(j) requires the BLM to provide a written response to NOAA Fisheries' EFH conservation recommendations within 30 days of its receipt of this letter. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse impacts of the activity on EFH. If the response is inconsistent with NOAA Fisheries' conservation recommendations, the BLM shall explain its reasons for not following the recommendations.

3.8 Supplemental Consultation

The BLM must reinitiate EFH consultation with NOAA Fisheries if either the action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

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